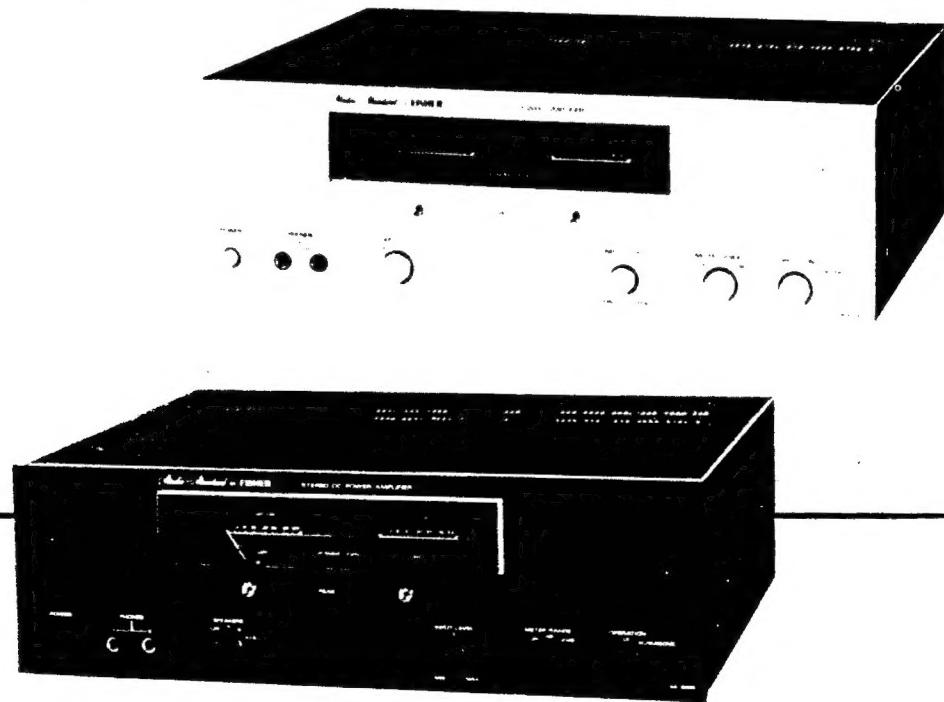


SERVICE MANUAL

FISHER

BA-6000

**Power Amplifier
(EUROPE)**

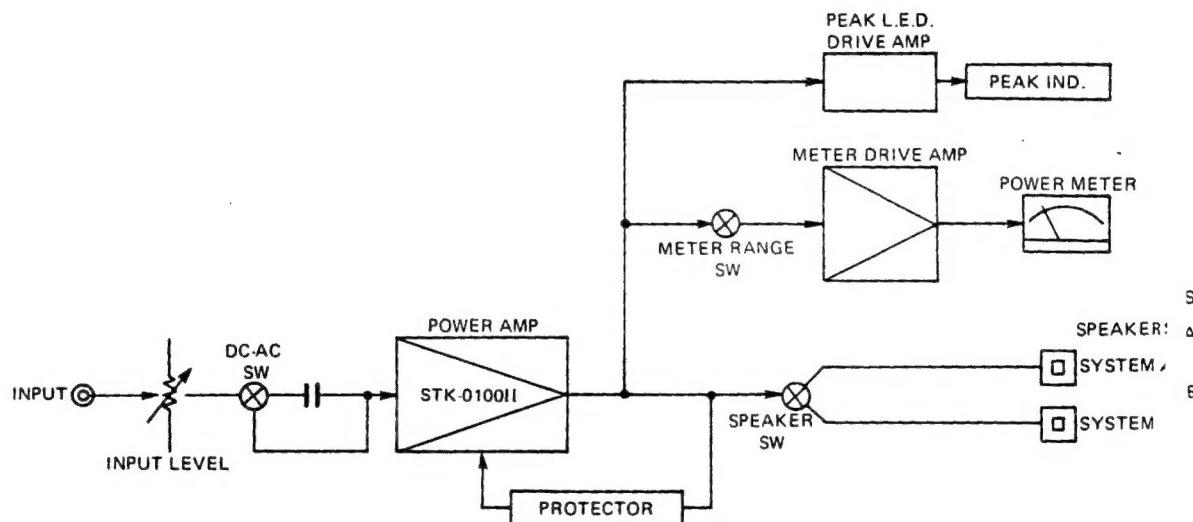


The first name in high fidelity

CONTENTS

Functional Block Diagram	2
Specifications	3
Cabinet & Chassis Exploded View	4
Parts List	5
Power Amp P.C.Board	6
Parts List	7
L.E.D. P.C.Board	8
Input/Meter P.C.Board	8
Parts List	8
Power Supply P.C.Board	9
SP Select P.C.Board	9
Parts List	9
Adjustment of The Power Amp P.C.Board	10
Point to Point Wiring Diagram	11,12
Schematic Diagram	13,14
Semiconductor Lead Identification	15
Power Amp IC STK0100II Equivalent Circuit	15

FUNCTIONAL BLOCK DIAGRAM

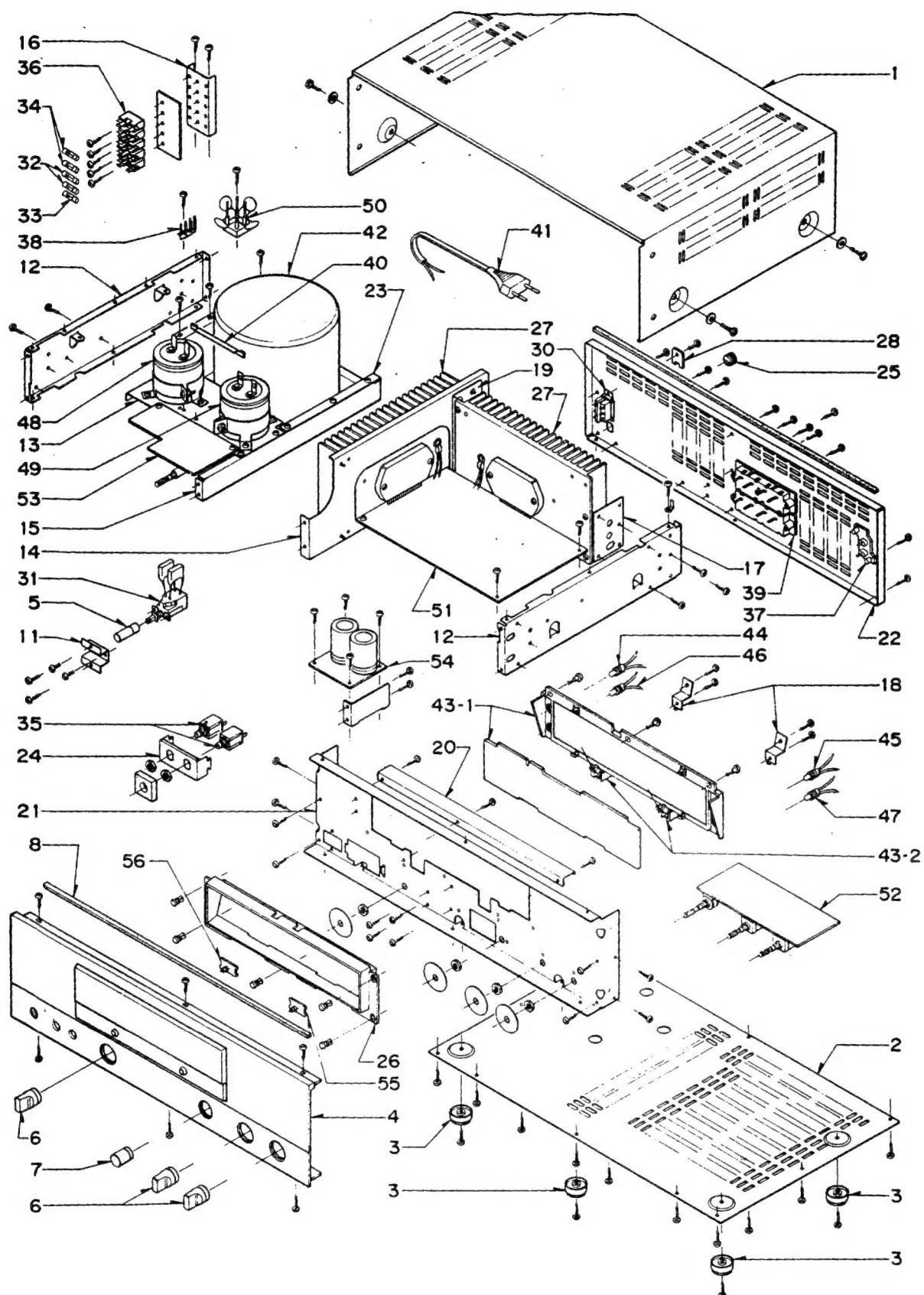


SPECIFICATIONS

POWER AMPLIFIER		BA-6000
Continuous Power	at 1000 Hz (4 ohms)	2 x 120 W
	at 1000 Hz (8 ohms)	2 x 120 W
	20 Hz to 20 kHz (4 ohms)	2 x 110 W
	20 Hz to 20 kHz (8 ohms)	2 x 100 W
Music Power	(4 ohms)	2 x 130 W
	(8 ohms)	2 x 130 W
Harmonic Distortion		
at Rated Power (at 1 kHz, 8 ohms)		0.002 %
I.M. Distortion		
at Rated Power (at 1 kHz, 8 ohms)		0.002 %
Damping Factor (8 ohms)		80
Power Bandwidth		DC -75 kHz
Frequency Response at Rated Power		20 Hz - 20 kHz, ±0.3 dB
Input Sensitivity and Impedance		1000 mV/100 kohms
Headphones Output		5 V/100 ohms
Level Meter		VU Meter
Meter Range (Switch-over)		0 dB/-20 dB
Subsonic Filter (-10 dB)		3 Hz
Crosstalk		75 dB
S/N Ratio (DIN)	at Rated Power	110 dB
	50 mW Output	≥ 60 dB
Power Requirements		110/220 V, 50/60 Hz
Power Consumption		
at Rated Power (Idling)		400 W (30 W)
Dimensions (W x H x D)		440 x 134 x 320 mm
Weight (approx.)		14.1 kg

Because Fisher products are subject to continuous improvement, Fisher reserves the right to modify, change, or alter any design or specifications without notice and without incurring any obligation. Fisher reserves the right to make changes and improvements upon its products without any obligation to install such changes upon any of its products previously manufactured.

CABINET & CHASSIS EXPLODED VIEW



PARTS LIST

PACKING PARTS LIST

Ref. No.	Parts Number	Description
	131 6 1139 78104	Box Corrugate-EXP
	131 6 2119 01362	Bag Polyethylene-EXP
	131 6 3009 28760	Pad (Right, Left)

ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
	131 2 1801 13900	Leg
	131 6 2719 10801	Bag Fan
	131 6 2719 11300	Bag Fan
	131 6 4119 79601	Explanatory Booklet
	131 6 4519 15700	Guarantee Certificate

CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 2 1401 22600	Cover
2	131 2 1105 24700	Plate Bottom
3	131 2 1801 12900	Leg

APPEARANCE PARTS LIST

Ref. No.	Parts Number	Description
4	131 0 1016 34000	Panel Decorate Assy (Silver)
	131 0 1016 34001	Panel Decorate Assy (Black)
5	131 0 1001 52600	Power Switch Knob (Silver)
	131 0 1001 52601	Power Switch Knob (Black)
6	131 0 1001 53700	Function Knob (Silver)
	131 0 1001 53701	Function Knob (Black)
7	131 0 1001 53800	Volume Knob (Silver)
	131 0 1001 53801	Volume Knob (Black)
8	131 2 5205 15300	Cushion

CHASSIS PARTS LIST

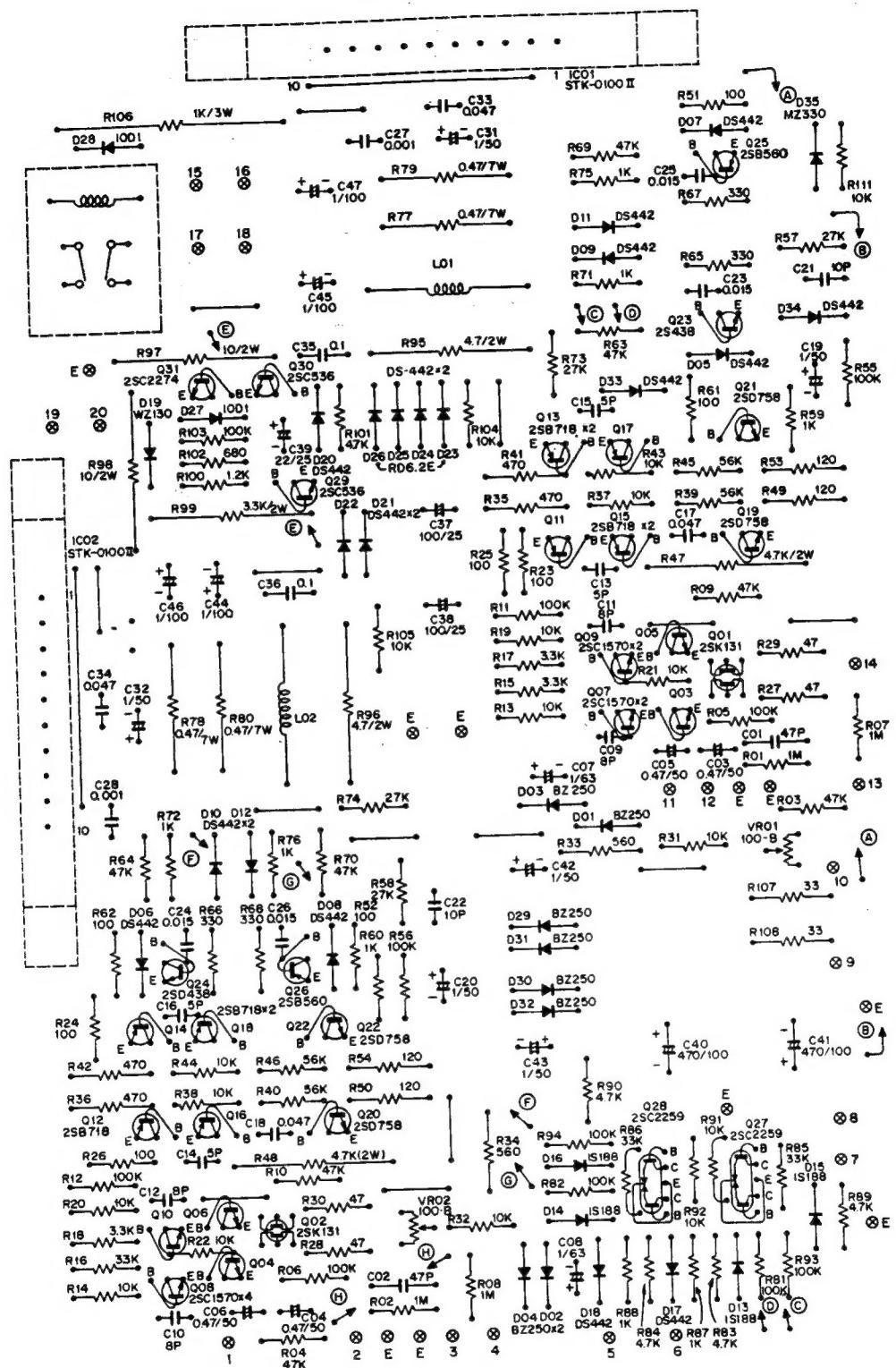
Ref. No.	Parts Number	Description
11	131 2 3101 66500	Metal Mount (Power Switch)
12	131 2 3101 66600	Metal Mount (Side)
13	131 2 3101 66700	Metal Mount
14	131 2 3101 66800	Metal Mount (Heat Sink)
15	131 2 3101 66900	Metal Mount (Center)
16	131 2 3101 67000	Metal Mount (Fuse)
17	131 2 3101 67100	Metal Mount (Side Panel)
18	131 2 3101 67200	Metal Mount (Rear Under)
19	131 2 3101 67300	Metal Mount (Heat Sink)
20	131 2 3101 67400	Metal Mount (Rear Upper)
21	* 131 2 3305 27100	Panel Front
22	* 131 2 3306 30300	Panel Rear
23	131 2 3617 17800	Metal Mount Transformer
24	131 2 3624 13000	Mount Headphone Jack
25	131 2 6111 14200	Bushing (AC Cord)
26	131 2 6113 35300	Shelter
27	131 2 6201 27400	Plate Heat Sink
28	131 2 7104 00500	Plate Pad Switch

ELECTRICAL PARTS LIST

Ref. No.	Parts Number	Description
30	4 2312 01020	Switch Slide
31	4 2312 01050	Switch Power 5P
32	4 2349 20310	Fuse 500mA
33	4 2349 20380	Fuse 1A
34	4 2349 21570	Fuse 6.3A
35	4 2352 00030	Jack Headphone
36	4 2359 21021	Fuse Holder
37	4 2359 23070	RCA 2P Jack
38	4 2372 00140	Terminal GND
39	4 2372 00680	SP Terminal
40	4 2372 00700	Terminal
41	4 2439 20526	Power Cord
42	4 2512 10120	Power Transformer
43	4 5112 00470	Meter VU Assy
43-1	131 0 1018 00800	Housing Assy
43-2	131 0 9905 00600	Movement
44	4 6122 00600	Pilot Lamp (8V 200mA)
45	4 6122 00620	Pilot Lamp (8V 200mA)
46	4 6122 01120	Pilot Lamp (8V 200mA)
47	4 6122 01130	Pilot Lamp (8V 200mA)
C01,02	C2EHRM103A	Metallized Paper 0.01 μ F 250V $\pm 20\%$
C03,04	C2HYDP103A	Ceramic 0.01 μ F 500V +100,-0%
05,06		
48(C07)	4 2232 00281	Electrolytic 15000 μ Fx1 67V
49(C08)	4 2232 00280	Electrolytic 15000 μ Fx1 67V
C09	C1HYDZ473A	Ceramic 0.047 μ F 50V +80,-20
50(D01)	DDD-S10VB20	Bridge Diode, S10VB20
51	* 131 0 4001 03620	Power Amp P.C.B. Assy
52	* 131 0 4001 03630	Input/Meter P.C.B. Assy
53	* 131 0 4001 03640	SP Select P.C.B. Assy
54	* 131 0 4001 03650	Power Supply P.C.B. Assy
55	* 131 0 4001 03660	L.E.D. P.C.B. Assy
56	* 131 0 4001 03670	L.E.D. P.C.B. Assy

*—Not a servie part.

POWER AMP P.C.BOARD
(BOTTOM VIEW)



IC PIN NUMBERS VOLTAGES											
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC01,02	STK-0010II	-3.7V	-57.8V	0V	-1.7V	-0.6V	0.5V	1.7V	0V	57.6V	3.7V

PARTS LIST

POWER AMP P.C.B. Assy
1310 4001 03620

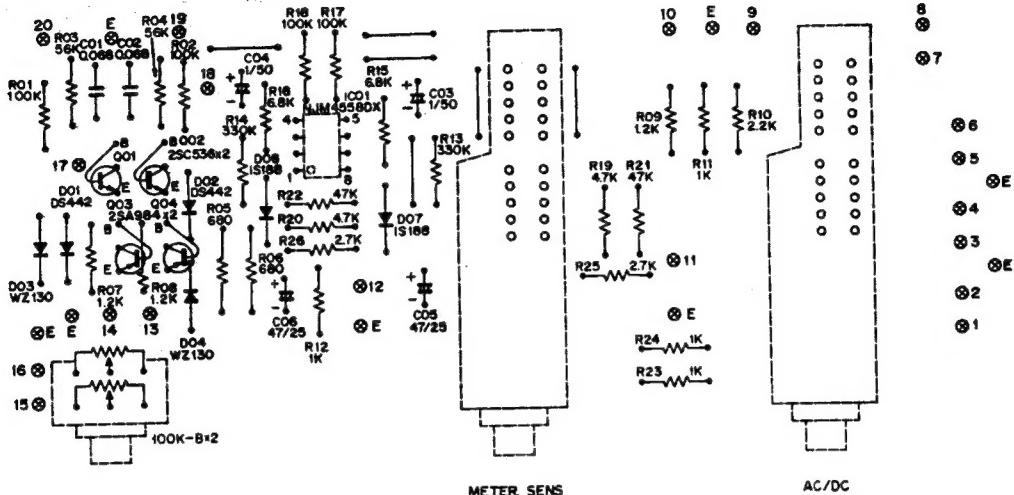
Ref. No.	Parts Number	Description	Ref. No.	Parts Number	Description
RESISTORS					
L01,02	4 2329 20170	Relay LY-2-0	R01,02	R2EDZJ105APA	Carbon 1M 1/4W ±5%
	HLL-PTH487A-B	Posistor	R03,04	R2EDZJ473APA	Carbon 47k 1/4W ±5%
VR01,02	4 2539 20281	Coil	R05,06	R2EDZJ104APA	Carbon 100k 1/4W ±5%
	4 2222 00240	VR 100-B	R07,08	R2EDZJ105APA	Carbon 1M 1/4W ±5%
CAPACITORS					
C01,02	C1HCZJ470SPA	Ceramic 47 pF 50V ±5%	R09,10	R2EDZJ473APA	Carbon 47k 1/4W ±5%
C03,04	C1HRE-474AL	Electrolytic 0.47 µF 50V	R11,12	R2EDZJ104APA	Carbon 100k 1/4W ±5%
05,06			R13,14	R2EDZJ103APA	Carbon 10k 1/4W ±5%
C07,08	C1JRY-105APA	Electrolytic 1 µF 63V	R15,16	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%
C09,10	C1HCYD080APA	Ceramic 8 pF 50V ±0.5%	17,18		
11,12			R19,20	R2EDZJ103APA	Carbon 10k 1/4W ±5%
C13,14	C2HCDK050SL	Ceramic 5 pF 500V ±10%	21,22		
15,16			R23,24	R2EDZJ101APA	Carbon 100 1/4W ±5%
C17,18	C1HFAJ473A	Mylar 0.047 µF 50V ±5%	25,26		
C19,20	C1HRE-105A	Electrolytic 1 µF 50V	R27,28	R2EDZJ470APA	Carbon 47 1/4W ±5%
C21,22	C1HCDD100SL	Ceramic 10 pF 50V ±0.5%	29,30		
C23,24	C1HFAJ153A	Mylar 0.015 µF 50V ±5%	R31,32	R2EDZJ103APA	Carbon 10k 1/4W ±5%
~5,26			R33,34	R2HZPK561A	Fuse 560 1/2W ±10%
~7,28	C2YFRK102A	Mylar 0.001 µF 150V ±10%	R35,36	R2HZPK471A	Fuse 470 1/2W ±10%
C31,32	C1HRY-105APA	Electrolytic 1 µF 50V	R37,38	R2EDZJ103APA	Carbon 10k 1/4W ±5%
C33,34	C1HFYK473APA	Mylar 0.047 µF 50V ±10%	R39,40	R2EDZJ563APA	Carbon 56k 1/4W ±5%
C35,36	C1HFAJ104A	Mylar 0.1 µF 50V ±5%	R41,42	R2HZPK471A	Fuse 470 1/2W ±10%
C37,38	C1EAEN107A	Electrolytic 100 µF 25V ±30%	R43,44	R2EDZJ103APA	Carbon 10k 1/4W ±5%
C39	C1ERE-226A	Electrolytic 22 µF 25V	R45,46	R2EDZJ563APA	Carbon 56k 1/4W ±5%
C40,41	C2ARE-477A	Electrolytic 470 µF 100V	R47,48	R3DXBJ472A	Oxide Metal Film 4.7k 2W ±5%
C42,43	C1HRY-105APA	Electrolytic 1 µF 50V	R49,50	R2HZPK121A	Fuse 120 1/2W ±10%
C44,45	C2ARY-105APA	Electrolytic 1 µF 100V	R51,52	R2EDZJ101APA	Carbon 100 1/4W ±5%
46,47			R53,54	R2HZPK121A	Fuse 120 1/2W ±10%
SEMICONDUCTORS					
D01,02	DJJ-BZ-250	Zener Diode, BZ-250 (25V)	R55,56	R2EDZJ104APA	Carbon 100k 1/4W ±5%
03,04			R57,58	R2EDJZ273APA	Carbon 27k 1/4W ±5%
D05,06	205 5 9040 44210	Diode, DS-442	R59,60	R2EDZJ102APA	Carbon 1k 1/4W ±5%
07,08,09,10,11,12			R61,62	R2EDZJ101APA	Carbon 100 1/4W ±5%
D13,14	202 5 9110 18820	Diode, 1S188FM1	R63,64	R2EDZJ473APA	Carbon 47k 1/4W ±5%
15,16			R65,66	R2EDZJ331APA	Carbon 330 1/4W ±5%
D17,18	205 5 9040 44210	Diode, DS-442	67,68		
D19	DJJ-WZ-130	Diode, WZ-130	R69,70	R2EDZJ473APA	Carbon 47k 1/4W ±5%
D20,21	205 5 9040 44210	Diode, DS-442	R71,72	R2EDZJ102APA	Carbon 1k 1/4W ±5%
22			R73,74	R2EDZJ273APA	Carbon 27k 1/4W ±5%
J23	DNN-RD6.2E	Diode, RD-6.2E	R75,76	R2EDZJ102APA	Carbon 1k 1/4W ±5%
D24,25	205 5 9040 44210	Diode, DS-442	R77,78	4 2212 00070	Cemen 0.47 7W
D26	DNN-RD6.2E	Diode, RD-6.2E	79,80		
D27,28	DCC-10D1---NA	Diode, 10D1	R81,82	R2EDZJ104APA	Carbon 100k 1/4W ±5%
D29,30	DJJ-BZ-250	Zener Diode, BZ-250 (25V)	R83,84	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
31,32			R85,86	R2EDZJ333APA	Carbon 33k 1/4W ±5%
D33,34	205 5 9040 44210	Diode, DS-442	R87,88	R2EDZJ102APA	Carbon 1k 1/4W ±5%
D35	DMZ-MZ330---A	Diode, MZ330A (30V)	R89,90	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
IC01,02	206 5 5210 10010	IC, STK-0100II	R91,92	R2EDZJ103APA	Carbon 10k 1/4W ±5%
Q01,02	TNN-2SK131-K	FET 2SK131 K, L	R93,94	R2EDZJ104APA	Carbon 100k 1/4W ±5%
Q03,04	203 5 5251 57079	TR 2SC1570 GL, HL	R95,96	R3DXBJ4R7A	Oxide Metal Film 4.7 2W ±5%
05,06,07,08,09,10			R97,98	R3DXBJ100A	Oxide Metal Film 10 2W ±5%
Q11,12	TKK-2SB718--C	TR 2SB718 C, D	R99	R3EXBJ32A	Oxide Metal Film 3.3k 2W ±5%
13,14,15,16,17,18			R100	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
Q19,20	TKK-2SD758--C	TR 2SD758 C, D	R101	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
21,22			R102	R2EDZJ681APA	Carbon 680 1/4W ±5%
Q23,24	203 5 6830 43850	TR 2SD438 E, F	R103	R2EDZJ104APA	Carbon 100k 1/4W ±5%
Q25,26	203 5 6840 56050	TR 2SB560 E, F	R104,105	R2EDZJ103APA	Carbon 10k 1/4W ±5%
Q27,28	TMM-2SC2259-F	TR 2SC2259	R106	R3WXBJ102A	Oxide Metal Film 1k 3W ±5%
Q29,30	203 5 5000 53660	TR 2SC536 F, G	R107,108	R2HZPK330A	Fuse 33 1/2W ±10%
Q31	203 5 7252 27450	TR 2SC2274 E, F	R111	R2EDZJ103APA	Carbon 10k 1/4W ±5%

L.E.D. P.C.BOARD
(BOTTOM VIEW)

INPUT/METER P.C.BOARD
(BOTTOM VIEW)



IC PIN NUMBERS VOLTAGES		1	2	3	4
SYMBOL No.	DEVICE	0V	0V	0V	-19.0V
IC01	NJM4558	5	6	7	8
		0V	0V	0V	22.0V



PARTS LIST

L.E.D. P.C.B. Assy
1310 4001 03660

Ref. No.	Parts Number	Description
SEMICONDUCTORS		
D01	DOO-SLP-132B	Diode, SLP-132B

L.E.D. P.C. B. Assy
1310 4001 03670

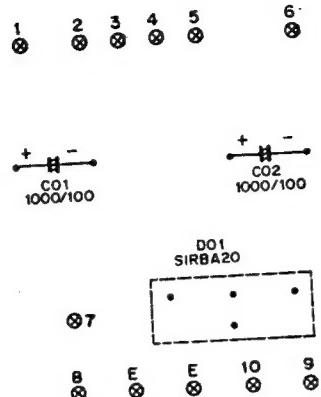
Ref. No.	Parts Number	Description
SEMICONDUCTORS		
D01	DOO-SLP-132B	Diode, SLP-132B

INPUT/METER P.C.B. Assy
1310 4001 03630

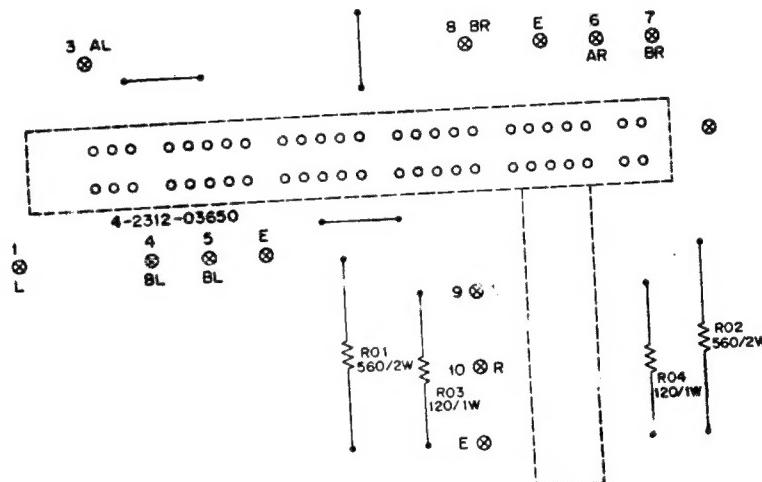
Ref. No.	Parts Number	Description
4 2222 01520	VR 100k-Bx2	
4 2312 03630	Switch Rotary 2-3	
4 2312 03640	Switch Rotary 4-2	

Ref. No.	Parts Number	Description
CAPACITORS		
C01,02	C1HFAJ683A	Mylar 0.068 μ F 50V $\pm 5\%$
C03,04	C1HRY-105APA	Electrolytic 1 μ F 50V
C05,06	C1ERY-476APA	Electrolytic 47 μ F 25V
SEMICONDUCTORS		
D01,02	205 5 9040 44210	Diode, DS442
D03,04	DJJ-WZ-130	Diode, WZ-130
D07,08	202 5 9110 18820	Diode, 1S188FM1
IC01	IJJ-NJM4558DC	IC, NJM4558D (C Rank)
Q01,02	203 5 5000 53660	TR 2SC536 F, G
RESISTORS		
R01,02	R2EDZJ104APA	Carbon 100k 1/4W $\pm 5\%$
R03,04	R2EDZJ563APA	Carbon 56k 1/4W $\pm 5\%$
R05,06	R2HZPK681A	Fuse 680 1/2W $\pm 10\%$
R07,08	R2EDZJ122APA	Carbon 1.2k 1/4W $\pm 5\%$
09		
R10	R2EDZJ222APA	Carbon 2.2k 1/4W $\pm 5\%$
R11,12	R2EDZJ102APA	Carbon 1k 1/4W $\pm 5\%$
R13,14	R2EDZJ334APA	Carbon 330k 1/4W $\pm 5\%$
R15,16	R2EDZJ682APA	Carbon 6.8k 1/4W $\pm 5\%$
R17,18	R2EDZJ104APA	Carbon 100k 1/4W $\pm 5\%$
R19,20	R2EDZJ472APA	Carbon 4.7k 1/4W $\pm 5\%$
R21,22	R2EDZJ473APA	Carbon 47k 1/4W $\pm 5\%$
R23,24	R2EDZJ102APA	Carbon 1k 1/4W $\pm 5\%$
R25,26	R2EDZJ272APA	Carbon 2.7k 1/4W $\pm 5\%$

POWER SUPPLY P.C.BOARD (BOTTOM VIEW)



SP SELECT P.C.BOARD (BOTTOM VIEW)



PARTS LIST

POWER SUPPLY P.C.B. Assy
1310 4001 03650

Ref. No.	Parts Number	Description
----------	--------------	-------------

CAPACITORS

C01,02 4 2232 00290 Electrolytic 1000 μ F 100V

SEMICONDUCTORS

D01 DDD-S1RBA20 Bridge Diode, S1RBA20 (1A)

SP SELECT P.C.B. Assy
1310 4001 03640

Ref. No.	Parts Number	Description
----------	--------------	-------------

4 2312 03650 Switch Rotary 10-4

RESISTORS

R01,02 R3DXBJ561A
R03,04 R3AXBJ121A

Oxide Metal Film 560 2W $\pm 5\%$
Oxide Metal Film 120 1W $\pm 5\%$

ADJUSTMENT OF THE POWER AMP P.C.BOARD

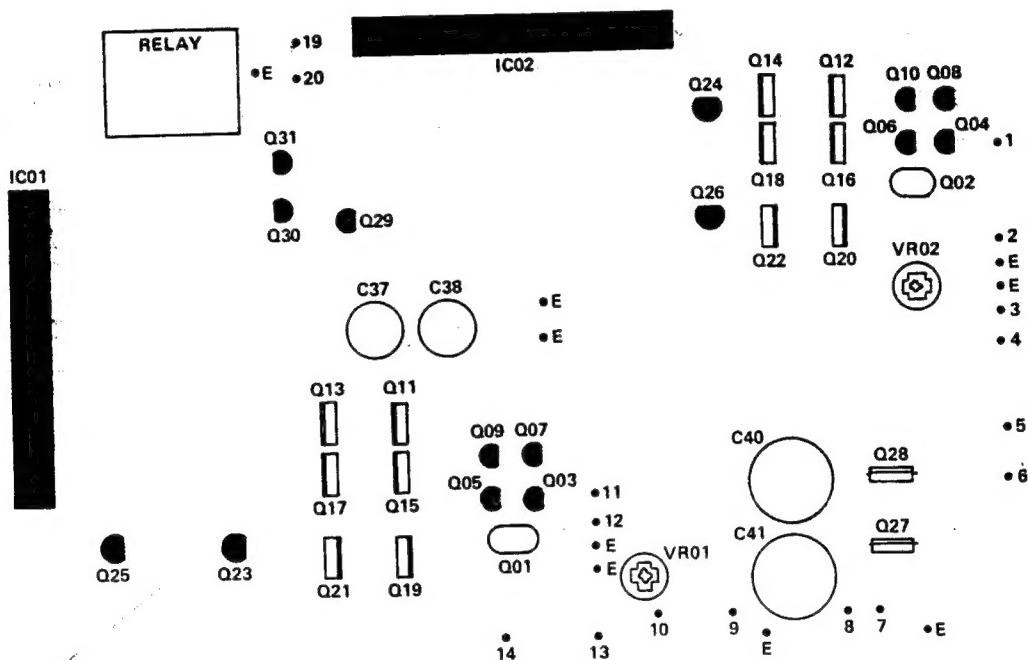
BEFORE ADJUSTMENT

1. After the power switch is turned ON, allow a few minutes before making adjustment, to be sure of the most stable operation.
2. Connect dummy load resistors (8 ohms) to the SPEAKERS terminals.
3. Use a DC V.T.V.M. (input impedance: More than 50k ohms/V).

ZERO BALANCE ADJUSTMENT

- Connect DC V.T.V.M. to the speaker output terminal and turn the volume control fully to the minimum position. Turn VR01, 02 under the above condition until the output voltage becomes 0 V.

POWER AMP P.C.BOARD LAYOUT (TOP VIEW)

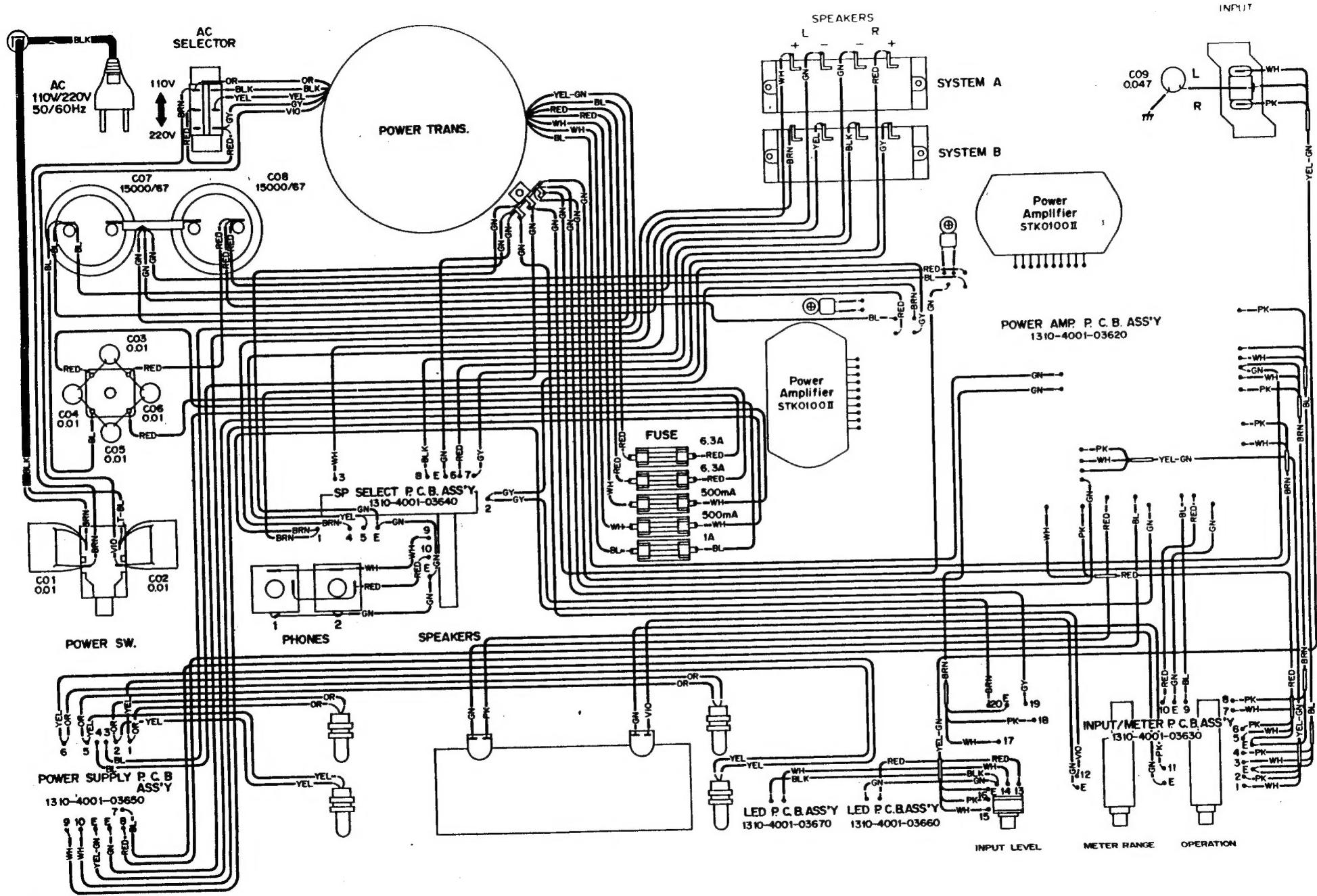


EXPLANATION OF PROTECTIVE CIRCUITS

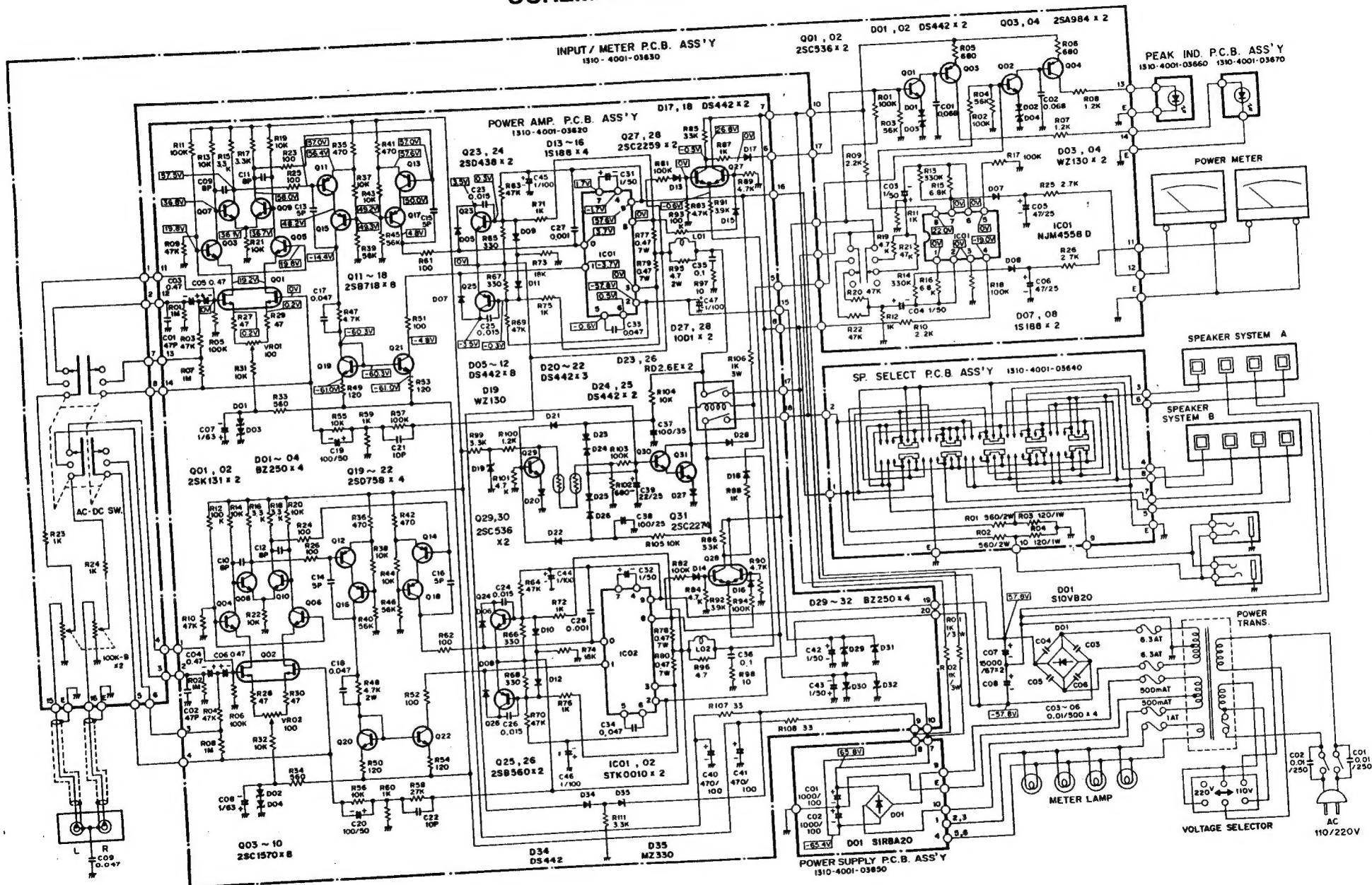
*For about two seconds after the power switch is turned on, the speakers remain silent because the power muting circuit operates during this time.

*If the speaker terminals are short-circuited or the ventilation holes at the cabinet top are blocked during long periods of operation, the internal temperature may rise abnormally. At about 90°C, the thermal sensor (temperature detection) circuit becomes activated and will interrupt the signal. If the cause is removed and the internal temperature is back to normal, the unit automatically resets itself to restore normal operation.

POINT TO POINT WIRING DIAGRAM



SCHEMATIC DIAGRAM



NOTES:
 1. All resistors values are indicated in "Ohm" ($K=10^3$, $M=10^6$)
 2. All capacitors values are indicated in " μF " ($P=10^{-12}$)
 3. All voltage values indicated on the schematics are measured under the

b. All voltages +10% with respect chassis ground
 c. No signals at input terminals
 d. AC input at 220 volts 50 Hz
 4. This is a fundamental schematics diagram. Some products may

SEMICONDUCTOR LEAD IDENTIFICATION

DIODES	INTEGRATED CIRCUIT
<ul style="list-style-type: none"> DS442 WZ130 1S188 BZ-250 RD-6.2E 10D1 MZ330A 	<ul style="list-style-type: none"> STK-0100II
TRANSISTORS	
<ul style="list-style-type: none"> 2SK131 <ul style="list-style-type: none"> 2SC2259 	<ul style="list-style-type: none"> NJM4558
<ul style="list-style-type: none"> 2SB718 2SD758 	<ul style="list-style-type: none"> 2SC536 2SC1570 2SC2274 2SD438 2SB560

POWER AMP IC STK0100II EQUIVALENT CIRCUIT

